

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figures 2 and 3. These sheets, which include Figures 1-4, replace the original sheets including Figures 1-4. The two views previously comprising Figure 2 are now labeled Figure 2A and Figure 2B; and the two views previously comprising Figure 3 are now labeled Figure 3A and Figure 3B.

Attachments: Replacement Sheets

REMARKS

Claims 2, 3, and 5-19 are pending in the application.

By the foregoing Amendment, claims 2, 3, 5-7, and 9-11 are amended. Claim 4 is canceled without prejudice or disclaimer. New claims 15-19 are added.

The specification is amended as discussed below.

In reviewing the application in the course of preparing this Response, it came to the attention of Applicant's counsel that Figures 2 and 3 as originally filed each comprised two different views of the invention. Consequently, the drawings are amended so that the two views previously comprising Figure 2 are now labeled Figure 2A and Figure 2B; and the two views previously comprising Figure 3 are now labeled Figure 3A and Figure 3B.

These changes are believed not to introduce new matter, and entry of the Amendment is respectfully requested.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections, and withdraw them.

Objections to the Specification

1. Objection to the Abstract

In paragraph 1 of the Office Action, the abstract was objected to as not fully describing the claimed invention. This objection is believed to be overcome by the cancellation of the abstract as originally filed and the new abstract substituted therefor.

2. Objections to the Disclosure

In paragraph 2, the disclosure was objected to due to a reference to claim 1 on page 2 and due to a lack of headings as provided by 37 C.F.R. § 1.77(b). These objections are believed to be overcome by the above amendments to the specification, whereby paragraph [0013] is amended to replace the reference to claim 1 with the text of claim 1 as originally filed; and by the addition of the requisite application headings.

Rejection under 35 U.S.C. § 112, ¶ 2

In paragraph 5 of the Office Action, claims 2-14 were rejected under section 112, second paragraph due to inclusion of “and/or.” This rejection is believed to be overcome by the rewriting of claims 2, 3, 5, and 6 to delete “and/or” and to replace it with the construction “at least one of ... and ...”, which has the same meaning, *see In re Gaubert*, 524 F.2d 1222, 187 USPQ 664 (CCPA 1975), and thus does not change the scope of the claims.

In the Office Action, it was stated that “and/or” renders the claims indefinite because “prominence and depression are not alternate equivalents. The term ‘or’ relates alternate equivalent elements.”

Applicant’s counsel is not aware of any authority that requires “or” to be interpreted as relating alternate equivalent elements. MPEP 2173.01, “Claim Terminology,” states:

A fundamental principle contained in 35 U.S.C. 112, second paragraph is that applicants are their own lexicographers. They can define in the claims what they regard as their invention essentially in whatever terms they choose so long as any special meaning assigned to a term is clearly set forth in the specification. See MPEP § 2111.01. Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the

boundaries of the subject matter for which protection is sought. As noted by the court in *In re Swinehart*, 439 F.2d 210, 160 USPQ 226 (CCPA 1971), a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought.

MPEP 2173.05(h), “Alternative Limitations,” section II, more specifically relates to use of “or”:

Alternative expressions using “or” are acceptable, such as “wherein R is A, B, C, or D.” The following phrases were each held to be acceptable and not in violation of 35 U.S.C. 112, second paragraph in *In re Gaubert*, 524 F.2d 1222, 187 USPQ 664 (CCPA 1975): “made entirely or in part of”; “at least one piece”; and “iron, steel or any other magnetic material.”

The MPEP does not condition the acceptability of “or” on it being used to relate alternate equivalent elements. The elements merely need to be alternates. In the example given in *In re Gaubert*, iron and steel are given as alternate examples of a magnetic material, but they are not, in a general sense, equivalent elements. Similarly, within the context of the present invention, “prominences” and “depressions” are alternate examples of types of roughness, just as “continuous” and “interrupted” and “curved” and “rectilinear” are alternate examples of geometric configurations.

Claim 7 was rejected on the basis that “it is not clear how prominences can be produced by drilling and depression produced by welding.” Claim 7 has been amended to clarify which processes are used to produce the two different types of roughness.

Claim 9 was rejected as reciting both a broad and a narrower limitation. This rejection is overcome by amending the recitation of materials in line with the court’s pronouncement in *In re Gaubert, supra* regarding acceptable examples of alternative claim language.

Claim 10 was rejected on the basis that “comparable procedures” was unclear. This rejection is overcome by the deletion of “or comparable procedures.”

Rejections under 35 U.S.C. § 103

In paragraph 7 of the Office Action, claims 2-14 were rejected under section 103(a) as being unpatentable over Watchorn or Ishii or Hebant or Canadian Patent No. 967770 or British Patent Application No. 2 355 750 or Japanese Patent Documents Nos. 7-42469, 08082186 (collectively, “the primary references”), and 2001-3363, in view of Kandle. To the extent the Examiner may consider this rejection to be applicable to independent claim 11 as presently amended, to claims 2, 3, 5-10, and 12-14 depending therefrom, and to independent claim 15, which incorporates the limitations of dependent claims 3 and 4, it is respectfully traversed.

The present application relates to a device for producing bored piles including an auger, which along at least part of the auger length is surrounded by rotating encasing tube and during boring, the encasing tube is rotated in or counter to the rotation direction of the auger, and in which the auger and the encasing tube are introduced essentially simultaneously into the ground during boring, wherein to facilitate material discharge, the surface roughness of the auger helix surface pointing in the feed direction is increased compared with the roughness of the rolled surfaces in a complete or partial surface manner by additional machining, and the increase in surface roughness extends at least over the auger length necessary for feed purposes.

These features of the invention are reflected in claim 11 in the recitation of “means for increasing the roughness of the helix surface in the feed direction for facilitating material discharge, the increased surface roughness extending over a portion of the auger length needed for feed purposes.”

In the Office Action, the primary references were characterized as all disclosing “a casing and auger wherein they are rotated in opposite and/or the same directions.” Kandle was cited as teaching “an auger’s helix having increased surface roughness in the feed direction,” with reference to Figure 1 and to column 1, lines 55 *et seq.*

Leaving aside whether the primary references disclose “a casing and auger wherein they are rotated in opposite and/or the same directions,” it is respectfully submitted that Kandle does not teach or suggest the means for increasing the roughness of the helix surface as recited in claim 11.

The means limitation of claim 11 is written in “means-plus-function” format in accordance with section 112, paragraph 6, which states that “such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”

According to MPEP 2183:

Factors that will support a conclusion that the prior art element is an equivalent are:

(A) the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. [Citations omitted.]

(B) a person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification. [Citations omitted.]

(C) there are insubstantial differences between the prior art element and the corresponding element disclosed in the specification. [Citations omitted.]

(D) the prior art element is a structural equivalent of the corresponding element disclosed in the specification. [Citations omitted.]

It is respectfully submitted that none of these factors is present in the teachings of Kandle. Kandle discloses a drill having a tapered spiral screw flight with a plurality of peripherally spaced socket members for individually carrying a removably secured cutting bit at a desired angle to the cutting surface for boring through hard rock materials encountered in earth boring operations. In

contrast, the corresponding structures of the “means” limitation of claim 11 described in the specification are punctiform or linear prominences and/or depressions, which may be essentially continuous and/or interrupted, and may be curved and/or rectilinear.

Contrary to the subject matter of the invention as recited in claim 11 (and in particular, the “means” limitation), Kandle discloses cutting bits positioned exclusively peripherally at the edge of the auger helix in order to cut through hard rocky earth material, while claim 11 recites that the means for increasing the roughness of the helix surface in the feed direction functions to facilitate material discharge.

In other words, looking at the factors set forth in MPEP 2183, (A) Kandle’s spaced socket members perform a very different function from that specified in the claim; (B) because of the differences in structure and function, a person of ordinary skill in the art would *not* have recognized the interchangeability of Kandle’s spaced socket members for the prominences and/or depressions disclosed in the specification; (C) there are substantial differences between Kandle’s spaced socket members and the prominences and/or depressions disclosed in the specification; and (D) Kandle’s spaced socket members are *not* a structural equivalent of the prominences and/or depressions disclosed in the specification.

New independent claim 15 recites the limitations of claim 3 and canceled claim 4, that the surface roughness is obtained by at least one of essentially linear prominences and depressions, the linear prominences and depressions essentially passing from the core tube to the outer edge of the auger helix. Kandle’s spaced socket members are neither essentially linear, nor do they pass from the core tube to the outer edge of the auger helix.

In view of the foregoing, it is respectfully submitted that the invention as recited in independent claims 11 and 15 and dependent claims 2, 3, 5-10, 14, and 16-19 are not taught or suggested by the primary references in view of Kandle; and that the rejection should be withdrawn.

Conclusion

All objections and rejections have been complied with, properly traversed, or rendered moot. Thus, it now appears that the application is in condition for allowance. Should any questions arise, the Examiner is invited to call the undersigned representative so that this case may receive an early Notice of Allowance.

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted,

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